

# METHODS AND APPARATUS FOR ALLEVIATING DEADLOCK IN A FIBRE CHANNEL NETWORK

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## **Abstract of the Disclosure**

Methods and apparatus are provided for alleviating deadlock and controlling congestion in a network such as a fibre channel network. Techniques are provided for detecting stalled frames at a fibre channel switch. Reserve credits are released  
10 when stalled frames are detected. In some instances, reserve credits are released after a predetermined period of time. Reserve credits allow transmission to effectively reduce deadlock and congestion. Reserve credits are particularly effective in reducing deadlock resulting from transient loops in a fibre channel network.